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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,007	09/28/2001	Naruhiko Kudo	NIS-12689	4824

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EXAMINER	
MCCLOUD, RENATA D	
ART UNIT	**PAPER NUMBER**
2837	

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/966,007	KUDO ET AL.	
	Examiner	Art Unit	
	Renata McCloud	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Double Patenting

1. Claims 1,2,3,4, and 5 objected to under 37 CFR 1.75 as being a substantial duplicate of claims 6,7,8,9, and 10 respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Regarding claims 1 and 6:

a. the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d);

b. the claims recite the limitations "the value", "the actual rotational speed", and "the target rotational speed". There is insufficient antecedent basis for these limitations in the claims.

Claims 2 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention: the limitation "said position detector and said rotational speed...detect position and rotational speed" is indefinite. This implies that the position detector detects the position and rotational speed, and that the rotational speed detector detects the position and rotational speed.

Regarding claims 4 and 9:

a. The term "normally" is a relative term which renders the claim indefinite. The term "normally" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

b. the phrase "set said turn-off time" should be "sets said turn off time".

Regarding claim 11:

a. The is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

b. The limitation "holted" is indefinite.

c. The limitation "of respective fan motor" has insufficient antecedent basis in the claim.

d. The limitation "the remaining fan motors" has insufficient antecedent basis in the claim.

e. The limitation "the respective maximum speed" has insufficient antecedent basis in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claim11 is rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (U.S. Patent 6,445,148).

Claim 11: Huang et al teaches a method to control a plurality of motors, where the motors are set to rotate at a speed slower than the maximum speed of a respective motor and the remaining motors are set to rotate at a respective maximum speed (e.g. Abstract; Column 1:60-2:1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kambe et al (U.S. Patent 6,211,635) in view of Chinomi et al (U.S. Patent 6,256,181).

Kambe et al teach the following:

Claims 1 and 6: a drive unit for a brushless fan motor including a stator with a plurality of excitation windings and a rotor with a plurality of rotor magnetic poles each constituted by a permanent magnet (e.g. Fig. 1), the unit having a position detector (e.g. Fig. 1, #2), a plurality of excitation switches connected in series to each of the excitation windings (e.g. Fig. 3, Fy and Fz), a power feed semiconductor switch between the excitation windings and power supply (e.g. Fig. 3, MCU), a power control circuit for outputting a control signal to control the on/off operation of the semiconductor switch (e.g. Fig. 1, #10), the power control circuit controlling the on/off operation based on a target rotational speed of the rotor (e.g. Column 1:66-2:10); and

Claims 2 and 7: the hall device for detecting the magnetic flux of the plural permanent magnets is on the side of the rotor (e.g. Fig. 1, #2.), and the positional detector detecting the position of the rotor based on the output of the hall device (e.g. Fig. 1, #2).

However , Kambe et al do not teach:

Claims 1 and 6: a rotational speed detecting means, a drive circuit for outputting an on/off change-over signal for the excitation changing-over semiconductor switch depending on an output of the position detector, or the power control circuit constructed so that after the rotational speed of the rotor is stabilized, the power feed semiconductor switch may have turn-off time set shorter when the rotational speed is shorter; and

Claim 2 and 7: the rotational speed detecting means detecting rotational speed of the rotor based on the output of the hall device.

Chinomi et al teach the following:

Claims 1 and 6: a rotational speed detector (e.g. Fig.1, #3; Column 2:22-26), a drive circuit for outputting an on/off change-over signal for the excitation changing-over semiconductor switch depending on an output of the position detector (e.g. Fig. 1, #2; Column 2:37-46), and the power control circuit constructed so that after the rotational speed of the rotor is stabilized, the power feed semiconductor switch may have turn-off time set shorter when the rotational speed is slower and the target rotational speed is set longer when the actual rotational speed is faster than the target rotational speed (e.g. Column 2:37-67); and

Claims 2 and 7: the rotational speed detecting means detecting rotational speed of the rotor based on the output of the hall device (e.g. Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the drive unit taught by Kambe et al to include the teachings of

Chinomi et al. The advantage of this would be a fan motor driving system with improved stopping, starting, resetting, and voltage control, even when the fan is driven by an external force.

Chinomi et al also teach:

Claims 3 and 8: until the rotational speed of the rotor is stabilized, the turn-off and turn-on time is set to a predetermined value (e.g. Column 4:25-30);

Claims 4 and 9: the power control circuit sets the target rotational speed to be slower than the maximum rotational speed and sets the turn-off time at zero so as to rotate the rotor at a maximum speed (e.g. Fig. 6); and

Claims 5 and 10: the power feed semiconductor switch is turned off or an alarm in given when the rotational speed of the rotor does not reach a predetermined rotational speed (e.g. Column 8:28-31).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (703) 308-1763. The examiner can normally be reached on Mon.-Thurs and every other Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Renata McCloud
Examiner
Art Unit 2837

RDM
December 12, 2002

ROBERT E. NAPPI
SUPERVISORY PATENT EXAMINER
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